

G. THUMSHIRN.  
Manufacture of Porcelain Knobs.

No. 156,830.

Patented Nov. 10, 1874.

fig. 1.

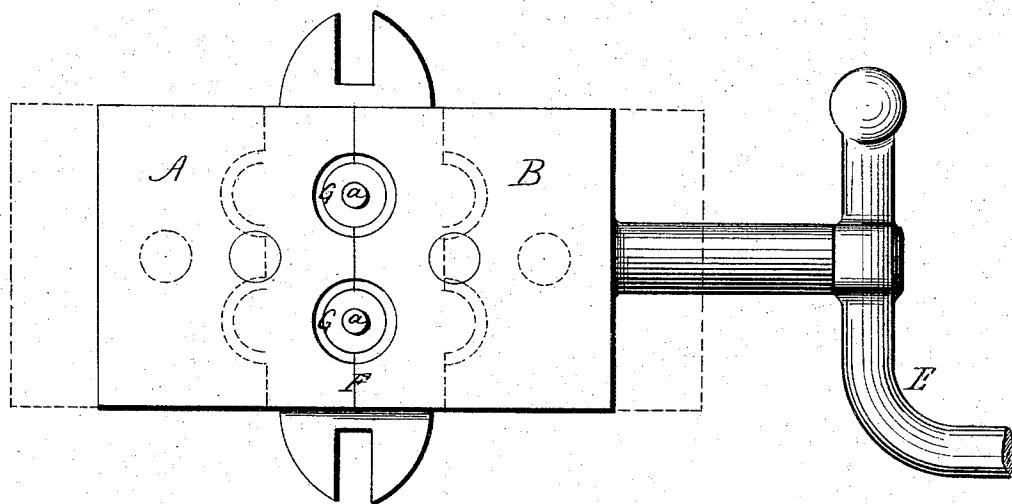


fig. 2.

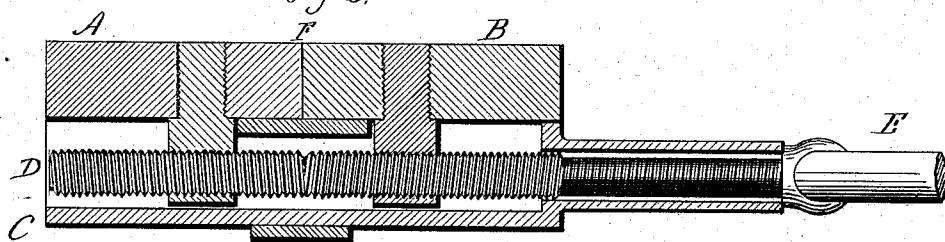
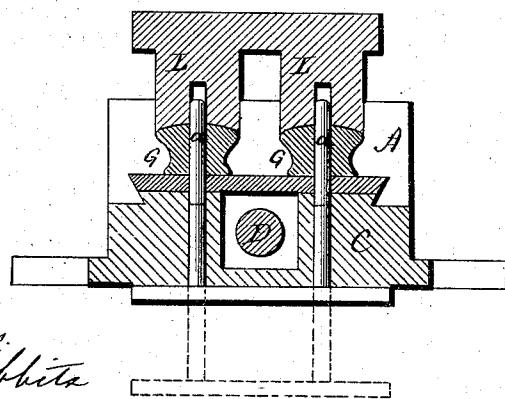


fig. 3.



Witnesses.  
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## IMPROVEMENT IN THE MANUFACTURE OF PORCELAIN KNOBS.

Specification forming part of Letters Patent No. **156,830**, dated November 10, 1874; application filed September 30, 1874.

*To all whom it may concern:*

Be it known that I, GEO. THUMSHIRN, of Branford, in the county of New Haven and State of Connecticut, have invented a new Improvement in Manufacture of Porcelain Knobs; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, top view; Fig. 2, longitudinal central section; and in Fig. 3, transverse central section.

This invention relates to an improvement in the manufacture of small knobs from porcelain, clay, or other material, the object being to compact the clay in the mold and allow of the easy removal of the complete knob without liability of injury to the knob. This class of knobs are usually made with a perforation entirely through their center for the insertion of a screw, by which they are secured in place. Their principal use is for inside window shutters or blinds, hence the trade-name of "shutter-knobs"; and the invention consists in a pair of reciprocating plates, in the meeting surfaces of which a cavity or cavities is formed corresponding to the lower part of the knob, combined with a central spindle, movable vertically through the said mold, and a follower to enter the said mold to compress the clay and form the upper surface, all as more fully hereinafter described.

A is one plate, B the other, arranged to move on a base, C, and guided by any suitable guides to insure their moving in the same line. A corresponding movement is imparted to each of the said plates by a right-and-left-hand screw, D, turned by a crank, E, or otherwise. This will move the two parts A B toward and from each other, and bring them

together along at the same central line F. In each of the parts A B is formed one-half of a cavity, G, each corresponding to the other and to the form of the knob below the largest transverse diameter of the knob on the center line; and in the center of each cavity a spindle, a, is set through the base C, but so as to be readily thrown down from the cavity, as denoted in broken lines, Fig. 3, above; and corresponding to the cavity G is arranged a follower, L, so as to enter and fill the cavities, the lower end corresponding to the face of the head of the knob, so that when pressed down into the cavities, as seen in Fig. 3, the space below is the exact form of the knob required to be produced, as seen in Fig. 3.

To use this apparatus, the mold or parts A B is closed, as seen in Figs. 1 and 2; the spindles then raised through the cavities, as seen in Fig. 3; then the required quantity of clay or material is placed in the center around the spindles; then the follower L is forced down upon the clay to give the required pressure to compact the clay; then the spindles are drawn down and the follower removed; then the part A B drawn open, as denoted in broken lines, Fig. 1, and the knobs are free from the mold; or the spindles may be left in place and the part A B drawn away, and the knobs then taken from the spindles.

I claim—

The combination of the two moving parts A B, in each of which one-half the cavity for the knob is formed, and mechanism, such as described, to simultaneously move said parts to and from each other, the central spindle or spindles a and the corresponding follower L, substantially as and for the purpose set forth.

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Witnesses:

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